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The third Paper was—

3. *On a Visit to Unexplored Parts in the North of Madagascar.*

By Dr. GUNST.

Dr. GUNST relates that he arrived in Madagascar from Mauritius during the brief reign of King Radama, and proceeded, after a short delay at the port of Tamatave, to the capital. He was disappointed in the appearance of the great forest of Almazoutra, and was of opinion that it was inferior in grandeur to the virgin forests of Australia, with which he had been long familiar. He remained four months in Antananarivo, and on returning to Tamatave explored much of the country. The district near Mahela he pronounced to be a gold country, as he discovered "alluvial gold dust, of a beautiful soft yellow colour," in the old bed of a river composed of slaty clay with mica in abundance, and a little milky quartz. Arrived at Tamatave, the Commandant of the Island St. Marie gave him a passage in the frigate *Hermione*, on his journey towards the north of Madagascar, which he now undertook, provided with letters from King Radama II. to the Governor of Vohemaro and Diego Suarez. At St. Marie he embarked in a small vessel of 8 tons' burthen, and next day cast anchor in the Port of Agouzy, north of the great Bay of Antongil. The port possesses two entrances, only one of which admits of the passage of large vessels. The inhabitants of the village and neighbourhood are Betsimsarakas, healthy and strongly built people, and friendly in their manners. The women were better clad than those of the Hovas and Sakalaves; their necks and arms were adorned with glass beads, and their hair plaited with a great many small tresses. The country for about 20 miles towards the interior appeared level, and was clothed with a luxuriant vegetation. At no great distance from the port there was a village, which he was told was inhabited by the Sakalave tribe. This people, according to what he heard, lives always apart from the other Madagascar tribes, who refuse to cultivate intimate relations with them. Their immorality is extreme, and some of their customs horribly disgusting: they are, moreover, lazy, superstitious, and given to thieving.

The night following, Dr. Gunst departed from Agouzy, and sailed with a gentle land-breeze along the wooded coast northwards. About daylight he passed Sambarava, a bay with a river and secure anchorage, about 50 miles south of Vohemaro. Small vessels of 30 tons' burthen can go up the river a distance of 8 miles. North of this place the aspect of the country began to change, and high mountains appeared, with naked hills near the coast. The moun-

tains formed three parallel ranges, and are estimated to reach in some places an altitude of 12,000 feet.

Vohemaro, at which place Dr. Gunst arrived in the evening of the same day, is recognizable by its coral reefs and islands, extending for miles at a distance of about one mile from the coast. He here presented Radama's letters to the Hova officers, and took up his residence ashore. The Governor lived at the Hova fortress Ambonio, 16 miles in the interior, and in his journey thither the next day he passed numerous villages belonging to four different tribes, the houses all built in the shade of large tamarind and other trees. The River Manabery or Vohemarino, which was forded on the road, runs through a splendid valley, fit for every species of tropical agricultural produce. The fortress is built on a tract of elevated ground, about thirty acres in extent, and is surrounded by palisades seven feet high, in the form of a square, protected at each angle by a bulwark which commands the flanks, and which is armed with two or three rusty old guns. There is a fortified enclosure inside, in which resides the Governor and about sixty half-naked and half-starved soldiers, with numerous officers. The military band is composed of four fiddles, and two large and two small drums, and as each instrument is played at the inspiration of the performer, the result is a loud noise and nothing more. After the interview, during which the letters from the King were read aloud, the Governor promised Dr. Gunst his best assistance in his proposed investigation of the province (a promise which he failed to perform), and the traveller then returned to Vohemaro to prepare for his journey.

He first visited the mountains in the north called Anambatou, 10 miles from the east coast, and 35 miles from Vohemaro. Here granites abounded, and his attention was attracted to a rock traversed by veins of a dull red metal, which he supposed to be copper. Specimens of this and other rocks and minerals he sent forward to St. Marie, as he had not means to investigate their nature himself. From these mountains he proceeded westward, traversing several valleys covered three feet deep with rich chocolate-coloured loam, and passing through a forest abounding in copal-trees, the resin of which is an important production of Madagascar. His provisions being then exhausted, he returned to Vohemaro.

He next proceeded by sea to Diego Suarez, and passed a magnificent bay called Amboudinoy by the Hovas, who, together with Antongars, constitute the population of the neighbourhood. The King of the Antongars resides on an island off the west coast, called Nossi Missou. The bay is sheltered from the sea by a very large

coral-reef seven miles in length extending southwards, and by a projecting headland on the north-east. At the north side is another reef, with many small islands. His vessel anchored in 16 fathoms of water, about 60 yards from the shore near the village, but between this and the beach was a coral-bank about 15 yards broad, dry at low water. A large plain extends hence towards the south, and westward an undulating country stretches for 25 miles to the foot of the precipitous mountain-range, the peaks of which appeared covered with snow. The country was diversified with coral-rocks, similar to those seen in the bay, and rich in fossils, fishes, crustacea, shells, and madrepores. Deep holes and crevices were filled with spring water of beautiful sweetness, and the soil was very fertile. Dr. Gunst was invited by the Commandant to visit the fort, which was situated on the top of a hill, which took him two and a half hours to climb by a narrow, tortuous, and steep path. The rock was chiefly pure gypsum, and of a blinding whiteness. From the summit he enjoyed an extensive view over the surrounding country, and saw enough to convince him that the whole had once been under water, the water-worn grottoes of the numerous coral-rocks with which the land was strewn affording ample proof of it. The residents of this elevated place were healthy and clean, but Dr. Gunst records that he saw no cases of fever anywhere in the north-eastern part of Madagascar.

On another excursion up a river in this neighbourhood Dr. Gunst saw more fossil remains in the coral-rocks, the most remarkable of which were the remains of some very large vertebrate animals. One large skeleton had eleven ribs, and the vertebræ were plainly to be seen; it lay embedded in a crust of coral about 3 feet thick at the base, and about $1\frac{1}{2}$ foot round at the top. The whole was 6 feet in length. There were several smaller ones in the vicinity, and a great quantity of remains of crustacea. After a sojourn of a week in the neighbourhood of this bay and Diego Suarez he again returned to Vohemar.

His last journey was an attempt to cross Madagascar to the west coast. He proceeded southwards, and on the second day arrived at the mouth of the River Amphon-nabe. A few miles from this he ascended a naked hill about 900 feet high, and had an extensive view over a wide plain to the west, the principal mountain-chain running north and south. He continued to the south-west for several days until he reached a tract of primeval forest, destitute of inhabitants, through which he and his attendants had to cut their way for many miles. Emerging from this, at a distance of about 60 miles in a direct line from Masonguil, he came again upon an

inhabited district, and visited the chief of the Ampanieros tribe, who had never before seen a white man. The clothing of the people was scanty, consisting simply of a covering round the middle. The men were armed with lances; and the musical instruments of the tribe consisted of drums made of hollow logs, with a skin stretched over one end, and bamboo rattles. Further to the west the country was inhabited by the savage, thievish Sakalaves, and Dr. Gunst's men refused to accompany him any further to the west; he turned, therefore, towards the south-east, and reached the River Sambarava, from which he made his way back again to Vohemaro. His explorations now came to an end by his being seized by a party of Hova soldiers, stripped naked, bound hand and foot, and dragged for a long distance over the ground. They robbed him of all he possessed, and then left him half-dead in a dirty hut; where he was assisted by his servant, and brought back to the village. The news of the outrage reached the French Commandant at St. Marie, who sent a corvette to fetch him away on the 2nd May, 1863, soon after which he returned to the island of Bourbon, and thence to Europe.

The PRESIDENT congratulated Dr. Gunst upon being alive and apparently in good health after all his sufferings. From what he had laid before them, geologists must feel convinced that there was a world of interest for geological exploration in the part of Madagascar which he had visited.

Before the adjournment of the meeting the President announced that a telegram had that day been received from Colonel Lewis Pelly, stating that he had returned in safety to Bushire, after leading his party to the Wahabite capital, in the interior of Arabia, and back. We might now hope to have shortly much new geographical information regarding this little-known country.

Fourteenth Meeting, June 12th, 1865.

SIR RODERICK I. MURCHISON, K.C.B., PRESIDENT, in the Chair.

PRESENTATIONS.—*Rev. C. Hudson; R. Milne Redhead, Esq.; Edward Langley, Esq.; J. M. Teesdale, Esq.; T. R. Izard, Esq.; and Major J. P. Briggs.*

ELECTIONS.—*William E. H. Ellis, Esq.; Major Longley, R.E.; John Grey Macfarlane, Esq.; Richard Milne Redhead, Esq.; Edward Spiller, Esq.; J. J. Wilkinson, Esq.*

ACCESSIONS TO THE LIBRARY.—‘*Phares de la Mer Méditerranée, de la Mer Noire, et de la Mer d’Azof,*’ par M. A. le Gras. ‘*A Pre-*

liminary Report on the Geology of New Brunswick,' by H. Y. Hind, Esq., M.A., &c. &c. 'On the alleged Submarine Forests on the Shores of Liverpool Bay and the River Mersey,' by J. Boulton, Esq., F.R.I.B.A. 'Life in Java,' by W. B. D'Almeida, Esq., &c. All presented by their respective authors. Continuation of Periodicals, Journals, &c. &c.

ACCESSIONS TO THE MAP-ROOM.—A Map of Buenos Ayres, on 4 sheets, by Don Saturnino Salas; presented by the author through Capt. Parish, R.N. A Map of Asia, on 4 sheets, by H. Kiepert. Map of the Arctic and Antarctic Regions, by A. Petermann. Map of Marocco, showing the route of Gerhard Rohlfs. Admiralty Charts and Ordnance Surveys up to date. MS. Map, accompanied by astronomical observations, showing the route of Messrs. Chapman and Baines in South Africa, from Walvisch Bay to the Victoria Falls, from their joint observations; drawn and presented by T. Baines, Esq., F.R.G.S. Also 9 photographic views, presented by the same.

The following communications were read :—

1. *Visit to the Wahabee Capital of Central Arabia.* By Lieut.-Colonel LEWIS PELLY, Her Majesty's Political Resident at Bushire, Persian Gulf.

THE author was led to undertake this remarkable journey to the chief seat of the jealous and bigoted Wahabee Mahommedans from having read in the published Proceedings of the Royal Geographical Society that the situation of these interior cities had never been fixed by direct observation. He was desirous, at the same time, of a personal interview with the Amir on matters connected with public duty. He started, therefore, with two officers attached to his establishment, Dr. Colvill and Lieut. Dawes, on the 18th of February in the present year. He entered the country at the Port of Kowait, in the north-western corner of the Persian Gulf, and proceeded in a s.s.w. direction over the desolate unpeopled waste which separates the neighbourhood of Kowait and all other coast settlements from the well-peopled and cultivated highlands, or *Najed*, of Central Arabia. The party did not attempt to conceal their nationality, although they found it prudent to throw the *abbah* and *chiffah* of the country over their own clothing, and thus avoid needless intrusion and collision. They travelled on camels, starting each morning a little before daybreak, and continuing the march until sunset: their astronomical observations for fixing positions were taken only at night, when the Arab attendants were asleep, and for this purpose they planted their tent with the entrance